

BIASED H₂ ETCH PROCESS IN DEPOSITION-ETCH- DEPOSITION GAP FILL

ABSTRACT

Biased plasma etch processes incorporating H₂ etch chemistries. In particular,
5 high density plasma chemical vapor etch-enhanced (deposition-etch-deposition) gap
fill processes incorporating etch chemistries which incorporate hydrogen as the
etchant that can effectively fill high aspect ratio gaps while reducing or eliminating
dielectric contamination by etchant chemical species.